AVIATION SUBDOMAIN ANNEX FOR THE WEAPON SYSTEMS DOMAIN

WS.AV.1 SUBDOMAIN OVERVIEW

A weapon system is a combination of one or more weapons with all related equipment, materials, services, personnel and means of delivery and deployment (if applicable) required for self sufficiency.

Systems covered within the Aviation subdomain include all DoD weapon systems on aeronautical platforms, except missiles, both manned and unmanned, fixed wing and rotorcraft.

This subdomain has been designated as an “emerging subdomain” for JTA 2.0; all standards in this subdomain are designated as emerging and are not mandated by JTA 2.0.

WS.AV.1.1 PURPOSE

This annex identifies standards for the Aviation subdomain of the Weapon Systems domain to include information standards and analogous standards applicable to Aviation systems.

WS.AV.1.2 BACKGROUND

The proposed and emerging standards in this subdomain are based on the work performed by the Army Weapon Systems Technical Architecture Working Group (WSTAWG).

WS.AV.1.3 SUBDOMAIN DESCRIPTION

The subdomain description is given in Section WS.AV.1.

WS.AV.1.4 SCOPE AND APPLICABILITY

This subdomain annex does not include any mandates at this time. Emerging standards are identified. Mandates are expected to be added in the next version of the JTA. Some proposed standards are identified.

WS.AV.1.5 TECHNICAL REFERENCE MODEL

The technical reference model adopted for use in this subdomain is the DoD TRM which is described in the Weapon Systems Domain Annex. The DoD TRM Service View and Interface View are used as applicable.

WS.AV.1.6 ANNEX ORGANIZATION

This annex is divided into three sections: the Overview in Section WS.AV.1, the additions to the JTA core standards in Section WS.AV.2, and the Subdomain Specific Services in Section WS.AV.3. Section WS.AV.2 follows the JTA Section 2 service area structure. The structure of Section WS.AV.3 will evolve as aviation-specific service areas are identified and a common structure is coordinated amongst the other annexes.

WS.AV.2 ADDITIONS TO THE JTA CORE

WS.AV.2.1 INTRODUCTION

This section identifies the standards for the Aviation Subdomain that are additional to standards in the JTA core.

WS.AV.2.2 INFORMATION PROCESSING STANDARDS

WS.AV.2.2.1 Additions

There are no additions mandated for the Information Processing Standards section.

WS.AV.2.2.2 Emerging Standards

WS.AV.2.2.2.1 Emerging Service Area Standards

WS.AV.2.2.2.1.1 Operating System Services

The Open Systems Joint Task Force (OSJTF) is sponsoring and synchronizing Weapon Systems domain involvement in the IEEE POSIX working groups. Many POSIX standards are at various stages of standardization and are expected to be revised shortly to accommodate real time systems' requirements and to provide for test methods. Therefore, the following emerging standards are being considered for mandate in this subdomain as additions to the JTA operating system services standards:

– SAE xxx: Operating System API for Ada Run Time System.

WS.AV.2.3 INFORMATION TRANSFER STANDARDS

There are no additions or emerging standards for the Information Transfer Standards section.

WS.AV.2.4 INFORMATION MODELING, METADATA, AND INFORMATION EXCHANGE STANDARDS

There are no additions or emerging standards for the JTA Information Modeling, Metadata, and Information Exchange Standards section.

WS.AV.2.5 HUMAN-COMPUTER INTERFACE STANDARDS

WS.AV.2.5.1 Additions

WS.AV.2.5.1.1 Symbology

There are no mandated standards for the Human-Computer Interface Standards section.

WS.AV.2.5.2 Emerging Standards

The following standard is not mandated in this version of the JTA, but is proposed for the next version of the JTA:

– MIL-STD-1787, Aircraft Display Symbology.

WS.AV.2.6 INFORMATION SYSTEMS SECURITY STANDARDS

There are no additions or emerging standards for the Information Systems Security Standards section.

WS.AV.3 SUBDOMAIN SPECIFIC SERVICE AREAS

WS.AV.3.1 APPLICATION SYSTEMS HARDWARE STANDARDS

WS.AV.3.1.1 Additions

WS.AV.3.1.1.1 Hardware Interface Standards

There are no mandated standards for the Hardware Interface Standards section.

WS.AV.3.1.1.1.1 Bus Interface Standards

There are no mandated standards for the Bus Interface Standards section.

WS.AV.3.1.1.1.2 General Hardware Interface Standards

There are no mandated standards for General Hardware Interface.

WS.AV.3.1.2 Emerging Standards

The following Bus Interface standards are not mandated in this version of the JTA but are proposed for the next version of the JTA:

- MIL-STD-1553B, Standard for Medium Speed System Network Bus, 21 September 1978, with Notice of Change 1, 12 February 1980, Notice of Change 2, 8 September 1986, Notice of Change 3, 31 January 1993, and Notice of Change 4, 15 January 1996.
- ANSI/VITA 1, VME64 Specification, 1994.
- MIL-STD-1773, Fiber Optics Mechanization of an Aircraft Internal Time Division Command/Response Multiplex Data Bus, 20 May 1988 with Notice of Change 1, 2 October 1989.

The following General Hardware standard is not mandated in this version of the JTA but is proposed for the next version of the JTA:

- MIL-STD-1389D, Design Requirements for Standard Electronic Module (SME), 30 March 1989.